CLAIMS:

What is claimed is:

1. A recording apparatus, comprising:

(a) a recording medium, having anisotrophic optical domains; and

(b) means for transferring a portion of said recording medium to a carrier, wherein a bulk portion of said recording medium has macroscopically detectable anisotrophic optical properties.

2. The recording apparatus according to claim 1, wherein said recording medium comprises a polymer having crystalline properties, wherein a crystalline domain of said polymer recording medium has anisotrophic properties.

3. The recording apparatus according to claim 1, wherein at least two recording media are provided, each having distinct anisotrophic properties, wherein said transferring means selects from available recording media to control an anisotrophic recording pattern.

4. The recording apparatus according to claim 1, wherein the recording medium is transferred in a pattern defined by a cipher.

5. The recording apparatus according to claim 4, wherein a message is encoded on said carrier comprising a self-authenticating description of said pattern.

6. The recording apparatus according to claim 3, wherein the pattern comprises a sparse distribution of recording medium on the carrier.

7. The recording apparatus according to claim 1, wherein the recording medium comprises a fluorescent dye composition.

8. A recording medium, comprising a polymer film having adhered thereto a transfer layer having a predefined anisotrophic optical property, the recording medium being adapted to selectively transfer portions the layer to a recording medium under influence of a print head.

9. A recording method, comprising the steps of:

(a) providing a recording medium, having anisotrophic optical domains; and

(b) transferring a portion of the recording medium to a carrier, wherein a bulk portion of the recording medium has macroscopically detectable anisotrophic optical properties.

10. The method according to claim 9, further comprising the step of accounting for said transferring step in an accounting database.

11. The method according to claim 9, further comprising the steps of: (a) defining a pattern of recording media on the carrier; (b) authenticating the carrier based on a correspondence of a subsequently detected pattern to the defined pattern; and (c) accounting for said authenticating step in an accounting database.

12. An imprinted carrier, produced by a method comprising the steps of: (a) providing a recording medium, having anisotrophic optical domains; and (b) transferring a portion of the recording medium to a carrier, wherein a bulk portion of the recording medium has macroscopically detectable anisotrophic optical properties.

13. The carrier according to Claim 12, wherein said carrier is associated with an object, wherein a message identifying the object is imprinted on the carrier.

14. An authentication device, comprising:

(a) an illumination source having a narrowband output adapted for exciting fluorescence;

(b) a time-varying polarizer;

(c) an optical filter to exclude the narrowband output;

(d) an optical imaging sensor; and

(e) a processor for performing a digital background subtraction under a plurality of polarizer conditions, for extracting dichroic elements sensed by the optical imaging sensor, and for authenticating a medium based on a correspondence of a sensed dichroic element pattern and a predetermined dichroic element pattern.

15. The device according to claim 14, wherein the illumination source comprises a broadband light source in series with a narrow band optical filter.

16. The device according to claim 14, wherein the time varying polarizer comprises a rotating linear polarizer.

17. The device according to claim 14, wherein said optical filter comprises a broadband bandpass optical filter.

18. An optical read only data storage medium, comprising an optically transparent substrate and a data pattern molded on a surface thereof, having a set of random defects, further comprising a recorded set of defect identifications associated therewith.

19. The storage medium according to claim 18, wherein the recorded set of defect identifications are imprinted as a serial data code on a surface of the medium.

20. The storage medium according to claim 18, wherein the recorded set of defect identifications are formed as a pattern on a surface of the medium in a common plane with the molded data pattern.

21. A data storage disk, comprising a graphic-bearing surface, an essentially unique code printed on the graphic bearing surface, and an ascertainable non-deterministic pattern on the disk, wherein the printed code provides self authentication for the disk based on the ascertainable non-deterministic pattern.

22. An encoded optical disk reader, comprising:

(a) an optical sensor for reading authentication data on the disk;

(b) a non-deterministic characteristic analyzer; and

(c) an authenticator, authenticating the disk based on an output of the non-deterministic characteristic analyzer and the authentication data.

23. The reader according to claim 22, wherein the optical sensor reads an optical encoding of the disk and the non-deterministic characteristic.

24. The reader according to claim 22, wherein the optical sensor is distinct from an optical sensor which reads an optical encoding of the disk.

25. The reader according to claim 22, wherein the non-deterministic characteristic comprises a random reading defect of the disk.

26. The reader according to claim 22, wherein the non-deterministic characteristic comprises a dye pattern on the disk.

27. The reader according to claim 22, wherein the non-deterministic characteristic comprises a random distribution of fibers disposed on the disk.

28. The reader according to claim 22, wherein the optical sensor reads a self-authentication code from the disk.

29. Authenticating sealing tape, comprising a tamper indicator, a periodic unique identification of a portion of the tape, and an ascertainable non-deterministic characteristic of the tape in proximity to the periodic unique identification portion.

30. The authenticating sealing tape according to claim 29, wherein the ascertainable non-deterministic characteristic is a pattern selected from the group consisting of a random dye pattern and a random fiber pattern.